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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,388	07/24/2006	Kiran Challapali	US040108	1301

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER	
ADDY, ANTHONY S	

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
10/08/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/597,388	CHALLAPALI ET AL.	
	Examiner	Art Unit	
	ANTHONY S. ADDY	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-3* is/are allowed.

6)☒ Claim(s) *4-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 July 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *07/24/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The references listed in the Information Disclosure Statement filed on July 24, 2006 have been considered by the examiner (see attached PTO-1449 form or PTO/SB/08A and 08B forms).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 4-6** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Stephens, U.S. Patent Number 7,512,070 (hereinafter Stephens)** and further in view of **Perkins et al., Pulse Train Deinterleaving via the Hough Transform Publication (hereinafter Perkins)**.

Regarding **claim 4**, Stephens teaches a device (*e.g., user wireless system 116*) for identifying opportunities in a radio network (see abstract and fig. 1) comprising:

a) a source (*e.g., an access point 128*);

b) a processor (*112*) for performing a computation, said processor comprising:

a means for identifying opportunities to transmit (*e.g., listening to obtain permission to transmit information during a transmit opportunity (TXOP)*)

c) a memory (*114*); and

d) at least one listening device (*e.g., antenna 117*) (see col. 3, lines 21-31, col. 4, lines 23-43 and fig. 1).

Stephens fails to explicitly teach a means for performing an Randomized Hough Transform, a means for generating a histogram based on the Randomized Hough Transform, and a means for identifying peaks in the histogram.

In an analogous field of endeavor, Perkins teaches a means for performing an Randomized Hough Transform, a means for generating a histogram based on the Randomized Hough Transform, and a means for identifying peaks in the histogram (see page III-200, paragraph 4.1, lines 19-21, paragraph 5, lines 21-27 and fig. 7).

It would therefore have been obvious to one of ordinary skill in the art at the time of the invention to modify Stephens with Perkins to include a processor means for performing an Randomized Hough Transform, a means for generating a histogram based on the Randomized Hough Transform, and a means for identifying peaks in the histogram, in order to accurately identify emitters within a network, since the Randomized Hough Transform gives a stronger peak identification of the emitters as taught by Perkins (see page III-200, paragraph 4.1, lines 19-21, paragraph 5, lines 21-27 and fig. 7).

Regarding **claim 5**, Stephens in view of Perkins teaches all the limitations of claim 4. Stephens in view of Perkins further teaches a device, wherein the device further comprises a

Medium Access Control, a physical layer (*112*), and at least one transmitter (*110*) (see *Stephens*, col. 3, lines 24-32 and fig. 1).

Regarding **claim 6**, Stephens in view of Perkins teaches all the limitations of claim 4. Stephens in view of Perkins further teaches a device, wherein the listening device *(i.e., antenna 117*) is an IEEE 802.11 slot mechanism (*i.e., reads on the teaching of Stephens that the user wireless system 116 may listen with antenna 117 to the medium for a random number of slots, wherein the communication may be implemented via a wireless local area network*) (see *Stephens,* col. 4, lines 1-7 & 37-40).

Allowable Subject Matter

4. **Claims 1-3** are allowed.

5. The following is a statement of reasons for the indication of allowable subject matter:

The present invention relates to a method and device for identifying opportunities to transmit in a radio network.

The instant invention with respect to **claim 1**, teaches a method for identifying opportunities to transmit in a radio network, identifying the uniquely distinct features of "*listening for a first period of time; detecting a first busy slot; listening for a second period of time; detecting a second busy slot; listening for a third period of time; detecting a third busy slot; recognizing a sequence of the first, second, and third busy slots as a function of time; performing a Randomized Hough Transform on the sequence; generating a histogram based on the Randomized Hough Transform; identifying peaks in the histogram; and determining whether the peaks correspond to a known radar*."

The closest prior art, **Stephens, U.S. Patent Number 7,512,070** in view of the **Pulse Train Deinterleaving via the Hough Transform Publication by Perkins et al.,** teaches a method for identifying opportunities in a radio network (see *Stephens*, abstract and col. 4, lines 23-43) comprising: listening a random number of time slots (see *Stephens*, col. 4, lines 37-39); performing an Randomized Hough Transform, generating a histogram based on the Randomized Hough Transform, identifying peaks in the histogram (see *Perkins*, page III-200, paragraph 4.1, lines 19-21, paragraph 5, lines 21-27 and fig. 7); and identifying an opportunity to transmit (see *Stephens*, abstract and col. 4, lines 23-43).

However, Stephens in view of Perkins fails to anticipate or render the above underlined limitations in combination with all the recited limitations of claim 1 obvious, over any of the prior art of record, alone or in combination.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

McFarland et al., U.S. Publication Number 2003/0107512 A1 discloses radar detection and dynamic frequency selection for wireless local area networks.

Wang et al., U.S. Patent Number 7,397,415 discloses system and method for detecting and de-interleaving radar emitters.

Andersen et al., U.S. Patent Number 5,583,505 discloses radar pulse detection and classification system.

Fischer et al., U.S. Publication Number 2005/0025174 A1 discloses managing an access point in the presence of separate protocols that share the same communications channel.

Ginzburg et al., U.S. Publication Number 2005/0041616 A1 discloses method and apparatus to adapt threshold of data frame protect mechanism.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY S. ADDY whose telephone number is (571)272-7795. The examiner can normally be reached on Mon-Thur 8:00am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Anthony S Addy/
Examiner, Art Unit 2617